

1. A registration optimization and/or correction **system** comprising:

(1) means for obtaining an RGB image of gear-side and operator side marks on a web;

5 (2) means for determining the [X,Y] coordinates of gear-side and operator side marks;

(3) means for determining the [X,Y] center of said gear-side and/or said operator-side marks;

10 (4) means for calculating absolute [X,Y] distance measurements from said RGB image and a traverse encoder;

(5) means for calculating absolute [X,Y] coordinates for gear-side and operator-side duplicate and test station marks;

15 (6) means for determining skew error;

(7) means for determining fan-out error;

(8) means for determining initial pre-registration error;

20 (9) means for determining combined pre-registration error;

(10) means for adjusting web print controls;

wherein

5 said means for adjusting web print controls is
adjusted based on said skew error, said fan-
out error, said initial pre-registration
error, and/or said combined pre-registration
error.

2. A registration optimization and/or correction **process** comprising:

- (a) obtaining an RGB image of gear-side and operator side marks on a web;
- 5 (b) determining the [X,Y] coordinates of gear-side and operator side marks;
- (c) determining the [X,Y] center of said gear-side and/or said operator-side marks;
- (d) calculating absolute [X,Y] distance measurements
10 from said RGB image and a traverse encoder;
- (e) calculating absolute [X,Y] coordinates for gear-side and operator-side duplicate and test station marks;
- (f) determining skew error;
- 15 (g) determining fan-out error;
- (h) determining initial pre-registration error;
- (i) determining combined pre-registration error; and
- (j) adjusting web print controls based on the results of steps (f) - (i).

3. The web **product** created by the registration optimization and/or correction control process of Claim 2.

4. A computer usable medium having computer-readable program code means providing registration optimization and/or correction, said computer-readable program means comprising:
- 5 (a) computer program code means for obtaining an RGB image of gear-side and operator side marks on a web;
- (b) computer program code means for determining the [X,Y] coordinates of gear-side and operator side marks;
- 10 (c) computer program code means for determining the [X,Y] center of said gear-side and/or said operator-side marks;
- (d) computer program code means for calculating absolute [X,Y] distance measurements from said RGB image and a traverse encoder;
- 15 (e) computer program code means for calculating absolute [X,Y] coordinates for gear-side and operator-side duplicate and test station marks;
- 20 (f) computer program code means for determining skew error;

- (g) computer program code means for determining fan-out error;
 - (h) computer program code means for determining initial pre-registration error;
 - 5 (i) computer program code means for determining combined pre-registration error; and
 - (j) computer program code means for adjusting web print controls based on the results of steps (f)-(i).
- 10 5. The computer usable medium of Claim 4 wherein said medium is compatible with a personal computer (PC).
6. The computer usable medium of Claim 5 wherein said computer code means utilizes a graphical user interface.
- 15 7. The computer usable medium of Claim 6 wherein said graphical user interface utilizes a Microsoft™ Windows™ operating environment.